Case study for Period 3 of the SimTrade course: Pitch a Stock

Air Liquide SA - AI

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Simtrade example

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Company Overview

Company highlights

History
Founded in 1902 by Georges Claude and Paul Delorme following the invention of industrial liquid air separation, Air Liquide has grown into a French multinational cornerstone of global manufacturing. Listed on the Paris Stock Exchange since 1913, the company boasts one of the most reliable track records on Euronext, delivering continuous revenue expansion and an unbroken annual dividend payout for over a century.

Customers
Operations are split across four primary Gas & Services divisions: **Large Industries** (high-volume pipeline supply for heavy manufacturing), **Industrial Merchant** (cylinder and bulk gases for SMEs), **Healthcare** (medical oxygen and home care services), and **Electronics** (ultra-pure specialty gases for semiconductor fabrication).

Strategy
Guided by its long-term strategic roadmaps (*ADVANCE* and *BEYOND 2030*), Air Liquide focuses on capturing energy transition growth (via low-carbon hydrogen production and Carbon Capture & Storage) while driving continuous operating margin expansion through dynamic pricing policies, operational efficiencies, and targeted capital deployment.

Key figures

Item	Value
Market Cap	€116,5B
Total Debt	€15,9B
Entreprise value	€132,4B
Revenue	€27B
Ebitda	€8,3B
Ebitda margins	30,74%
Cash	€2,1B

Business Model

Operating segments

- Industrial Basin Monopolies: Air Liquide clusters production plants inside major industrial basins (e.g., Antwerp/Rotterdam, US Gulf Coast) and connects them via dedicated pipelines. This creates localized natural monopolies with immense geographic barriers to entry.

- Long-Term Take-or-Pay Contracts: Large industrial clients sign 15–20 year *take-or-pay* contracts, guaranteeing fixed capacity revenue regardless of whether the customer draws down 10% or 100% of their gas volume.

- Built-in Energy Cost Pass-Through: Industrial gas production requires high energy input; contracts contain indexed pricing formulas that automatically pass fluctuating electricity and natural gas costs through to clients, insulating operating margins.

- Asset Lifecycle & Cross-Segment Synergies: High upfront capex to build facilities turns into multi-decade cash flow annuities, while surplus liquid gas from large industrial plants is funneled into higher-margin merchant and healthcare delivery routes to maximize return on capital.

Operating segments

Industrial Merchant (~45% of Revenue): Delivers packaged, cylinder, and bulk gases to small-and-medium enterprises across diverse end-markets like metal fabrication, food processing, and research.

· **Large Industries (~28% of Revenue):** Provides massive volume industrial gas supply (oxygen, nitrogen, hydrogen) to heavy manufacturing via dedicated pipeline networks under 15–20 year take-or-pay contracts.

· **Healthcare (~16% of Revenue):** Supplies medical oxygen, specialty medical gases, and home care monitoring services to hospitals and over 2 million patients globally.

· **Electronics (~8% of Revenue):** Delivers ultra-pure specialty gases, carrier gases, and advanced materials for high-tech semiconductor fabrication.

Operating Forecast

Revenue & FCF forecast

In M€	FY2023	FY2024	FY2025	FY2026E	FY2027E	FY2028E	FY2029E
Revenue :	27608	27058	26940	28556	29984	31483	32743
Revenue growth (%)		-1,99%	-0,44%	6%	5%	5%	4%
Cost of goods sold (COGS)	23036	22112	21661	-22845	-23987	-25187	-26194
Operating profit	4572	4946	5279	5711	5997	6297	6549
Margins	16,56%	18,28%	19,60%	20%	20%	20%	20%
Tax rate	23,40%	24,00%	25,19%	25%	25%	25%	25%
Income tax	-1070	-1187	-1330	-1428	-1499	-1574	-1637
NOPAT (Net profit after tax)	3502	3759	3949	4283	4498	4723	4911
minus reinvestment (Capex, D&A...)	-1382	-1029	-1281	-1428	-1499	-1574	-1637
reinvestments as a % of revenue	5,01%	3,80%	4,76%	5%	5%	5%	5%
FCF	**2120**	**2730**	**2668**	**2856**	**2998**	**3148**	**3274**

We assume that Air Liquide's revenue will grow by 6% in 2026, 5% in 2027 and 2028, and 4% in 2029.

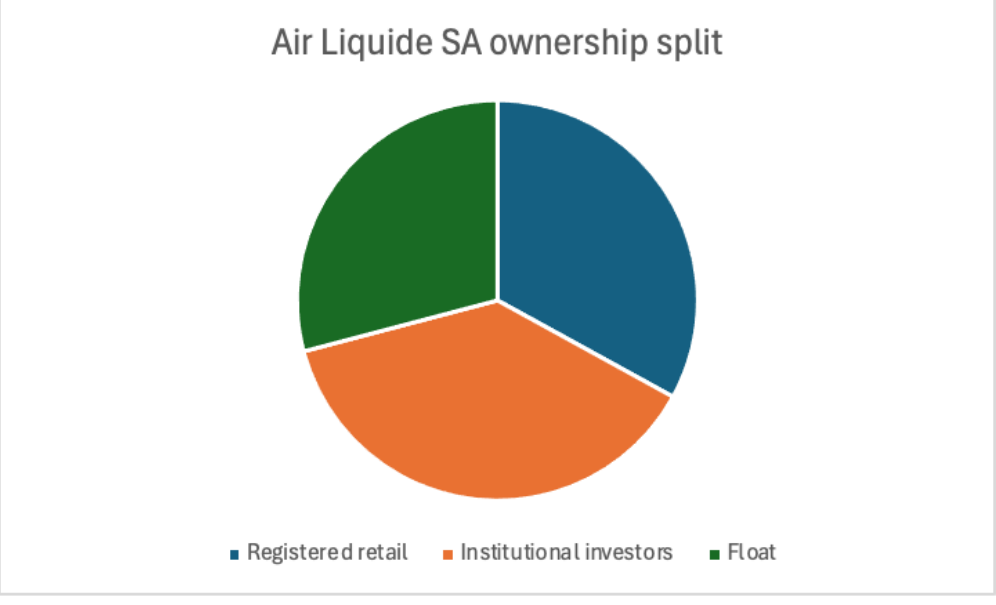
We also assume that operating margins will increase slightly and remain at 20%

Shareholder Ownership Analysis

Ownership Analysis

Air Liquide's ownership can be split in three category :

- 33% of shareholders are retail investors registered into Air Liquide's investor loyalty program, that awards a 10% dividend bonus and extra share allocations for holdings registered for over two full calendar years.
- Another 37.9% of capital is held by large institutional investors
- The remaining 29.1% of the capital is float.



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Competitive Landscape

Company	Market Cap	Revenue Ebitda	Strategic focus
Linde	€209.1B	Revenue: €31.5B EBITDA margin 39%	Linde pursues an aggressive operational-efficiency and price-optimization strategy to maintain its industry-leading ~39% EBITDA margin. The company actively optimizes its portfolio (such as restructuring underperforming assets) while maintaining strict capital discipline, prioritizing high-return sale-of-gas projects, and targeting structural growth in electronics and clean hydrogen energy transitions. Analysts view Linde as the highest-quality compounder in the sector, though its aggressive pricing strategy faces occasional volume macro-headwinds.
Air Products	€62,1B	Revenue: €27B EBITDA margin 30%	Air Products focuses on a high-risk, high-reward mega-project strategy, placing massive capital bets on mega-scale green hydrogen and green ammonia export facilities (such as the NEOM project). The company relies heavily on 30-year, fixed-price take-or-pay agreements to secure offtake for these multi-billion-dollar investments. While offering the highest long-term growth potential in energy transition, analysts remain cautious about execution risks, capital overruns, and policy dependency tied to large-scale energy projects.
Nippon Sanso	€14,2B	Revenue: €11.5B EBITDA margin 37%	Nippon Sanso focuses on expanding its presence in Asia-Pacific semiconductor manufacturing through high-purity electronics gases, alongside expanding its regional presence across North America and Europe under a unified global brand identity. Unlike its Western peers, it leverages steady, highly defensive cash flows from its consumer segment (Thermos) to offset lower operating margins in its regional merchant gas operations. Analysts view Nippon Sanso as a specialized niche player with strong semiconductor exposure, but lower pricing power.

Industry trends – Global industrial gases

Overview of the global industrial gases industry

Market Structure & Oligopoly Power

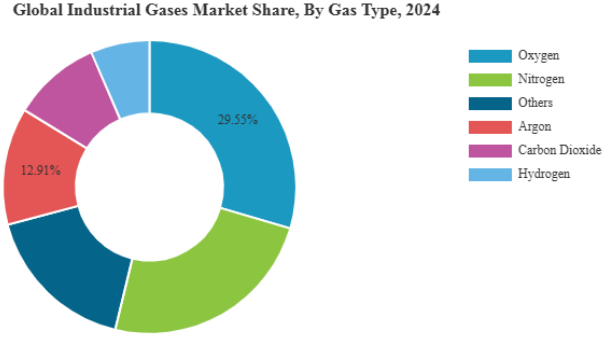
The $120/130B USD industrial gas industry operates as a tight global oligopoly, dominated by three firms :

- Linde (~30-35% market share),
- Air Liquide (~25-30%),
- Air Products (~15-20%).

Industrial gases account for a tiny fraction of a client's total operating costs, but are mission-critical to production, so suppliers can consistently pass through raw material cost inflation, with relatively little demand destruction.

High Barriers to Entry & Local Moats

The industry features massive structural entry barriers, because of heavy capital requirements and complex logistic networks. Air separation plants and specialized distribution fleets demand significant upfront investments, while pipeline networks in major industrial clusters create natural local monopolies. Customers face immense switching costs, as any supply disruption can halt entire manufacturing complexes.

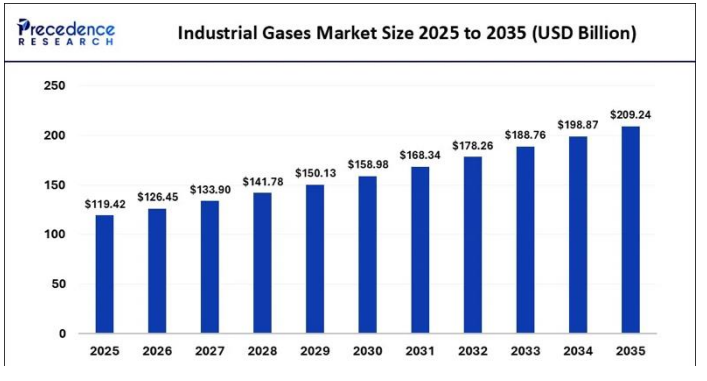


Trends and growth drivers

Industry demand grows at roughly 1.2x–1.5x global industrial production, around ~4–6% CAGR.

There are three key structural growth drivers:

- **Energy Transition** (heavy industrial demand for clean hydrogen and Carbon Capture & Storage to meet net-zero targets)
- **Electronics** (surging requirement for ultra-pure specialty gases in advanced semiconductor manufacturing)
- **Healthcare** (expanding home healthcare and medical oxygen demand in aging populations).



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Investment Thesis

High moats and oligopolistic position

Air Liquide operates within a highly consolidated global oligopoly where three major players control ~75% of the global industrial gas market.
High capital expenditure requirements for air separation units (ASUs) and dense regional distribution networks create formidable local moats against potential new entrants.

Long-term contracts (and cashflows) visibility

Air Liquide operates predominantly under 15- to 20-year take-or-pay contracts. Under these contract structures, customers are contractually obligated to pay fixed capacity fees regardless of whether they draw down full gas volumes, insulating Air Liquide's cash flows from short-term industrial cycle downturns.

Highly loyal investor base

~33% of shares are directly owned by registered retail investors, who benefit from a 10% dividend bonus and free share allocations for long-term holding. This structural retail support lowers stock price volatility relative to CAC 40 peers.

Risks and Catalysts

Risks (downside drivers)

- **European Industrial Contraction:** Persistent macroeconomic stagnation or manufacturing slowdowns across Western Europe impacting industrial gas drawdowns in Large Industries.
- **Energy Price Volatility & Input Inflation:** Extreme fluctuations in electricity and natural gas costs creating near-term operational margin pressure before price pass-through mechanisms kick in.
- **Capital Allocation & Project Execution Delays:** Multi-billion-euro clean energy megaprojects facing regulatory bottlenecks, execution delays, or lower-than-anticipated return on invested capital (ROIC).
- **Valuation Multiple Compression:** The stock trading at premium historical multiples leaves it vulnerable to profit-taking, equity market pullbacks, or sector rotation if guidance falls short.

Catalysts (upside drivers)

- **Semiconductor & AI Expansion:** Surging demand for ultra-pure specialty gases and advanced carrier materials driven by global semiconductor fab builds under the **BEYOND 2030** framework.
- **Energy Transition Megaprojects:** Acceleration in long-term contract backlogs for low-carbon hydrogen production, carbon capture & storage (CCS), and PEM electrolyzers across heavy industrial basins.
- **Operational Performance & Margin Expansion:** Structural efficiency gains from standardized procurement, digital AI process optimization, and dynamic price indexation targeting 400–600 bps of margin expansion by 2030.
- **Resilient Healthcare Growth:** Steady cash flow expansion driven by global home healthcare demand, AI-driven patient monitoring services, and specialized medical gas solutions.

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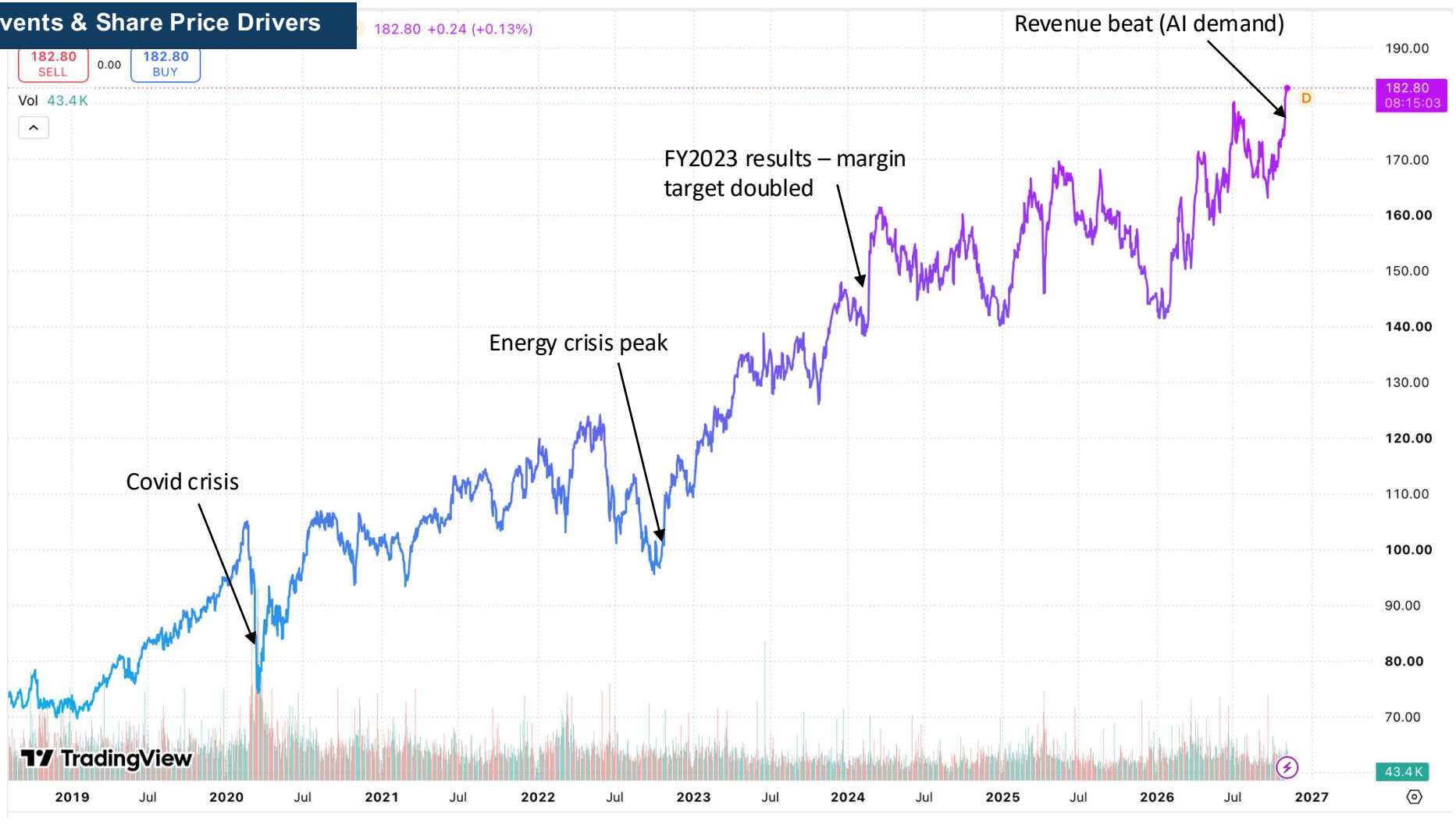
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Historical Share Price Analysis

Key Events & Share Price Drivers



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DCF Model Output

Calculations

In M€

	FY2026E	FY2027E	FY2028E	FY2029E	Terminal value
Cashflow	2856	2998	3148	3274	81151
Discount duration	*0*	*1*	*2*	*3*	*4*
Discount factor	*1*	*1,072*	*1,148*	*1,230*	*1,318*
Discounted value	**2855,64**	**2798,19**	**2741,89**	**2661,14**	**61550,64**

Total entreprise value	72608
Total debt	17259
Total equity value	55349
Number of shares	638164573
Faire value per share	**86,73 €**
Current share price	182 €
Difference vs. Current (%)	**-52,35%**

WACC Calculation

WACC calculation :	
Market capitalization (E)	116223
Total debt (D)	17259
Equity weight	87,07%
Debt weight	12,93%
Equity beta	0,887
Risk-free rate	3,31%
Equity risk premium	5%
Cost of equity	**7,74%**
Cost of debt	4,26%
Tax rate	25%
Post-tax cost of debt	**3,20%**
WACC :	**7,16%**

Our DCF outputs a fair value per share of **86.73€**, corresponding to a 52.35% discount to today's share price.

Comparables Analysis

Comparable Company Rationale

These companies are the three largest competitors of Air Liquide, so it made sense to include them in the comparables analysis.

Company	Market cap (EUR B)	Share price	Earnings per share	Price / Earnings ratio
Air Liquide SA	116,5	187,87 €	6,70 €	28,0
Linde PLC	209,1	456,95 €	16,26 €	28,1
Air Products & Chemicals	62,1	279,56 €	12,72 €	22,0
Nippon Sanso Holdings	14,2	32,71 €	1,98 €	16,5

Average P/E ratio (excluding Air Liquide) :	22,2
Target price for Air Liquide :	**148,74 €**

Air Liquide's Price/Earnings ratio of 28 is high relative to its peers. Linde also has a PE ratio of 28, but APC and NSH have a lower multiple. This could imply that Air Liquide is overvalued relative to its peers.

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Investment Recommendation & Trading Implementation

Price target calculation

Valuation reference	Target price	
DCF value	86,73 €	(per share)
Trading comparables value	148,74 €	(per share)
Analysts' consensus target price	201,59 €	Date: 06/11/2026
Current stock price	187,87 €	Date: 06/11/2026

My Valuation

My target price	110,00 €
Investment horizon	12 months
Upside / downside potential (%)	**-41,45%**

Valuation analysis

My target price is 110€, much below the current 187€ trading price, for a -41.45% downside potential.

The company is overvalued at the cashflows level (as shows the DCF with a fair value of 86.73€) but also relative to its peers (as shows the trading comps analysis with a fair value of 148.73€).

My target price is 110€, closer to the DCF than the comparables, as the peer group is a bit small and I am therefore more confident in the DCF valuation.

Trading implementation

I recommend to SELL Air Liquide, with an entry price of 187.87€, a stop-loss at 200€, and a take-profit at 110€, for a risk/profit of 6,42.

Be aware that this trading recommendation is consistent with the exercise of this simplified equity research, but may not reflect the outcome of a more thorough equity research work. This is not investment advice.

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Appendix 1: Industrial model

